



# Cisco UCS C-Series Integration with Cisco UCS Manager

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This chapter includes the following sections:

- [Overview, page 1](#)
- [Integrating Release 1.2\(2\) Server with Cisco UCS Manager 1.4 or 2.0\(1\), page 2](#)
- [Required Items for Integration with UCS Manager 1.4 or 2.0\(1\), page 2](#)
- [Connecting the Server with Cisco UCS Domain, page 3](#)
- [Physical Connectivity Illustrations, page 4](#)
- [Managing the Rack-Mount Server in Cisco UCS Manager after Integration, page 6](#)
- [Reverting a Server From Cisco UCS Domain Mode to Standalone Mode, page 7](#)

## Overview

This guide contains information and procedures for installing Cisco UCS C200, C210 and C250 servers for integration with Cisco UCS Manager release 1.4 or 2.0.1.

Cisco UCS C-Series Rack-Mount Servers are managed by the built-in standalone software, Cisco Integrated Management Controller (CIMC). When a C-Series Rack-Mount Server is integrated with Cisco UCS Manager, the CIMC does not manage the server anymore. Instead it is managed with the Cisco UCS Manager software. You will manage the server using the Cisco UCS Manager GUI or Cisco UCS Manager CLI.



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**Important**

If your server is not factory new, make sure to reset the server to factory default settings before integrating the server with Cisco UCS Manager.

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You can integrate Cisco UCS C-Series Rack-Mount Servers with Cisco UCS Manager in either one of the following setup:

- **Cluster setup:** Using two fabric extenders (FEXes) to connect the C-Series Rack-Mount Server with two fabric interconnects.
- **Non-cluster setup:** Connecting the C-Series Rack-Mount Server with one FEX and one FI.

# Integrating Release 1.2(2) Server with Cisco UCS Manager 1.4 or 2.0(1)

Release 1.2(2) servers have the firmware and settings prerequisites for Cisco UCS Manager built into them. You can connect them to the Cisco UCS Manager 1.4 or 2.0(1) immediately.



## Note

Server release 1.3 does not support integration with Cisco UCS Manager. If you want to manage the server with Cisco UCS Manager, do not upgrade your server to later than 1.2(2) release version.

See the following URLs for additional information about the equipment in this configuration.

For information about the Cisco UCS 6100 Series or 6200 Series fabric interconnects (FIs) in the configuration, see the documentation at the following links:

- [Cisco UCS 6100 Series Fabric Interconnect documentation](#)
- [Cisco UCS 6200 Series Fabric Interconnect documentation](#)

For information about the Cisco Nexus 2248 fabric extenders (FEXes) in the configuration, see the documentation at the following link:

[Cisco Nexus 2000 Series Fabric Extender documentation](#)

## Required Items for Integration with UCS Manager 1.4 or 2.0(1)

You must have the following items to integrate a C-Series Rack-Mount Server with Cisco UCS Manager:



## Note

The hardware configuration will contain redundant network fabrics and paths for both management traffic and data traffic.

- A Cisco UCS system that is running Cisco UCS Manager release 1.4(1) or 2.0(1).
- A Cisco C-Series Rack-Mount Server C200, C210 or C250 server with a 10-Gb adapter card installed.



## Note

If you install Cisco UCS P81E Virtual Interface Card (N2XX-ACPCI01), and want to use this card for UCS integration, the minimum card-firmware level requirement is 1.4(li). See the section on Special Considerations for the Cisco UCS P81E Virtual Interface Card (N2XX-ACPCI01), in [Install and Upgrade Guides](#).

- Two Cisco UCS 6100 Series or 6200 Series FIs. The switch ports where FEXes will be connected must be marked as server ports.
- Two Cisco Nexus 2248 FEXes.

**Note**

You must plug a power cord into each of the two power supplies in the FEX. If the power is connected and there are issues in the hardware, you might see “Major” faults reported during power-on self test (POST). For example, you might see this error: `Power supply 1 in fex 6 power: error`. You can clear these errors by connecting the missing power cord to the FEX power supply.

- Two RJ-45 Ethernet cables.
- Four 10-Gb SFP cables.

## Connecting the Server with Cisco UCS Domain

Before connecting the server with the Cisco UCS domain, make sure you have the recommended card-firmware level for the integration. To view illustrations on the connectivity for each C-Series Rack-Mount Server, see [Physical Connectivity Illustrations](#), on page 4.

**Important**

Make sure the server CIMC is set to factory default settings to integrate with Cisco UCS Manager.

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- Step 1** Install the server in the rack. See the *Install and Upgrade Guide* for the server that you are using. The install guides are available at the following url: [Install and Upgrade Guides](#).
- Step 2** To connect the management traffic paths, do the following:
- a) Connect an RJ-45 Ethernet cable between 1-Gb port Eth1 on the rear panel of the server and a port on a FEX that is connected to Fabric A. You can use any port on the FEX.
  - b) Connect an RJ-45 Ethernet cable between 1-Gb port Eth2 on the rear panel of the server and a port on a FEX that is connected to Fabric B. You can use any port on the FEX.
  - c) Connect a 10-Gb SFP cable between FEX A and a port on FI A. You can use any port on FI A, but the port must be enabled for server traffic.
  - d) Connect a 10-Gb SFP cable between FEX B and a port on FI B. You can use any port on FI B, but the port must be enabled for server traffic
- Step 3** To connect the data traffic paths, do the following:
- a) Connect a 10-Gb SFP cable between the 10-Gb adapter card in the server and a port on FI A. You can use any port on FI A, but the port must be enabled for server traffic.
  - b) Connect a 10-Gb SFP cable between the 10-Gb adapter card in the server and a port on FI B. You can use any port on FI B, but the port must be enabled for server traffic.
- Step 4** Attach a power cord to each power supply in your server, and then attach the power cord to a grounded AC power outlet.
- Note** During bootup, the server beeps once for each USB device that is attached to the server. Even if there are no external USB devices attached, there is a short beep for each virtual USB device such as a virtual floppy drive, CD/DVD drive, keyboard, or mouse. A beep is also emitted if a USB device is hot-plugged or hot-unplugged during BIOS power-on self test (POST), or while you are accessing the BIOS Setup utility or the EFI shell.

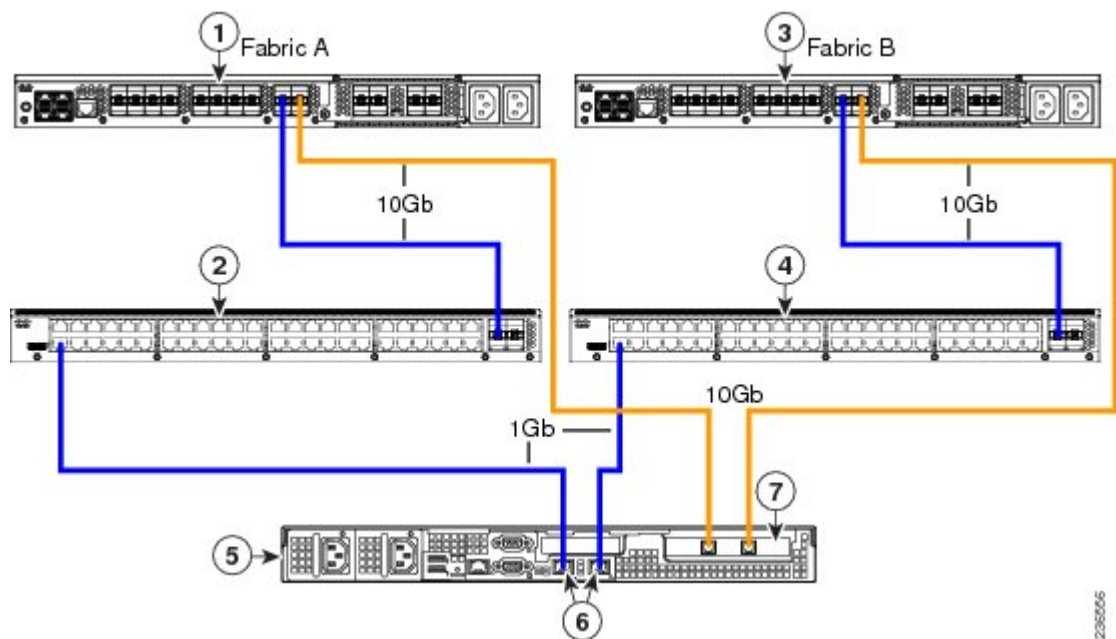
- Step 5** Connect a keyboard and VGA monitor to the server.
- Step 6** Reboot the server.
- Step 7** To view and configure settings for the server from within the Cisco UCS Manager software, see the information instructions in the [Cisco UCS Manager Configuration Guide for Release 1.4\(1\)](#) or the [Cisco UCS Manager Configuration Guide for Release 2.0\(1\)](#)

## Physical Connectivity Illustrations

The following images shows the physical connectivity for each C-Series Rack-Mount Server with Cisco UCS Domain, Cisco UCS Manager, release 1.4 or 2.0.1.

The following image show the cabling configuration for Cisco UCS Manager integration with the C200 M2 server. The paths shown in blue carry management traffic. The paths shown in gold carry data traffic.

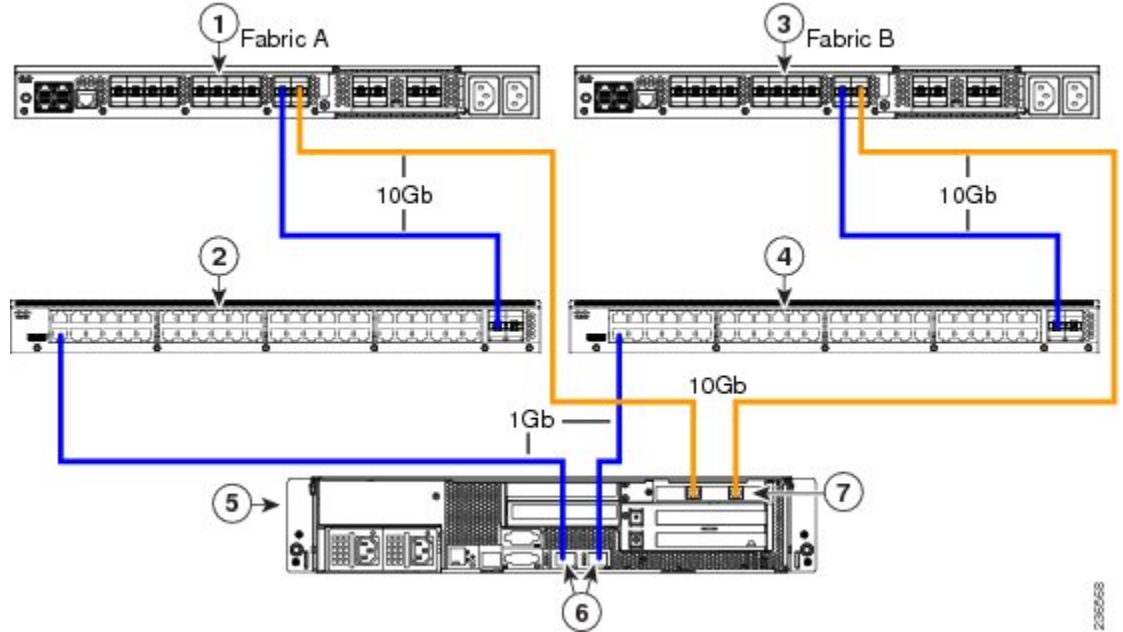
**Figure 1: Cisco UCS C200 M2 Server**



1	Cisco UCS 6100 Series or 6200 FI (Fabric A)	5	Cisco UCS C200 M2 Server
2	Cisco Nexus 2248 FEX (Fabric A)	6	1-Gb Ethernet LOM ports
3	Cisco UCS 6100 Series or 6200 FI (Fabric B)	7	10-Gb Adapter card in PCIe slot 6
4	Cisco Nexus 2248 FEX (Fabric B)	-	-

The following image show the cabling configuration for Cisco UCS Manager integration with the C210 M2 server. The paths shown in blue carry management traffic. The paths shown in gold carry data traffic.

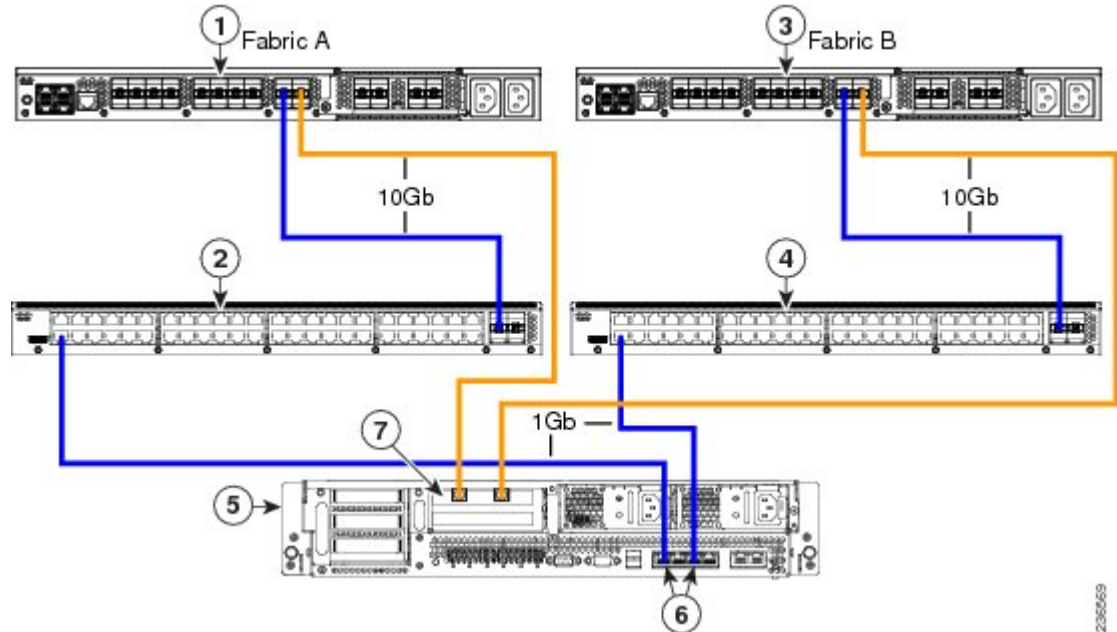
**Figure 2: Cisco UCS C210 M2 Server**



1	Cisco UCS 6100 Series or 6200 FI (Fabric A)	5	Cisco UCS C210 M2 Server
2	Cisco Nexus 2248 FEX (Fabric A)	6	1-Gb Ethernet LOM ports
3	Cisco UCS 6100 Series or 6200 FI (Fabric B)	7	10-Gb Adapter card in PCIe slot 1
4	Cisco Nexus 2248 FEX (Fabric B)	-	-

The following image show the cabling configuration for Cisco UCS Manager integration with the C250 M2 server. The paths shown in blue carry management traffic. The paths shown in gold carry data traffic.

**Figure 3: Cisco UCS C250 M2 Server**



1	Cisco UCS 6100 Series or 6200 FI (Fabric A)	5	Cisco UCS C250 M2 Server
2	Cisco Nexus 2248 FEX (Fabric A)	6	1-Gb Ethernet LOM ports Eth1 and Eth 3
3	Cisco UCS 6100 Series or 6200 FI (Fabric B)	7	10-Gb Adapter card in PCIe slot D
4	Cisco Nexus 2248 FEX (Fabric B)	-	-

## Managing the Rack-Mount Server in Cisco UCS Manager after Integration

You can manage and monitor all rack-mount servers that have been integrated with a Cisco UCS domain through Cisco UCS Manager. After the integration, you will perform all rack-mount server management tasks only through the service profiles from Cisco UCS Manager GUI or Cisco UCS Manager CLI. The C-Series Rack-Mount Server CIMC is not accessible when you start managing the server with Cisco UCS Manager.

Cisco UCS Manager provides information, errors, and faults for each rack-mount server that it has discovered.

For more information on managing C-Series Rack-Mount Servers from Cisco UCS Manager, see the chapter on Managing Rack-Mount Servers in your release specific [Cisco UCS Manager GUI Configuration Guide](#).

# Reverting a Server From Cisco UCS Domain Mode to Standalone Mode

When you manage a Cisco UCS C-Series server with Cisco UCS Manager software, a UCS Manager service profile is associated with the server. If you want to revert a C-Series server to standalone mode (so that it can be managed by CIMC software), you must do the following actions in UCS Manager:

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**Step 1** Disassociate the UCS Manager service profile from the server.

**Step 2** Decommission the server.

**Caution** If you do not disassociate the service profile from the server, MAC and WWN numbers assigned by UCS Manager might be kept by the server. This can cause numbering duplication and conflicts with other servers that are managed by UCS Manager. Also, if you revert a server to standalone mode without disassociating its service profile, any LSI RAID controller will not show as a bootable device in the standalone server, preventing local booting.

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